

REMARKS/ARGUMENTS

Support for the amendment to Claim 1 is found in original Claims 1 and 4-7 and at specification page 6, lines 19ff. The amendment to Claim 3 is supported by this claim as originally filed. The amendment to Claims 7 and 9 is supported by original Claim 6. New Claim 11 is supported at specification page 4, lines 8-10. New Claim 12 is supported by original Claim 6. New Claims 13 and 14 are supported at specification page 2, lines 32-36. New Claim 15 is supported at specification page 3, lines 12-14. New Claim 16 is supported at specification page 4, lines 16-17. New Claim 17 is supported at specification page 4, lines 28-30. New Claim 18 is supported by the paragraph bridging specification pages 3-4. New Claim 19 is supported at specification page 4, lines 19-20. Finally, new Claim 20 is supported at specification page 5, lines 3-5. No new matter has been entered.

By the above amendment Applicant has amended the claims so as to be directed to the treatment of an organochlorine substance in the liquid or solid state. As explained at specification page 4, lines 33ff, organochlorine compounds are known to have a long half life, on the order of tens of years in the ground, and thus are highly damaging to the environment. In addition, these compounds typically are hydrophobic, avoid aqueous phases, and concentrate in fatty tissues. Thus, they accumulate in the food chain and are dangerous to humans. The present invention provides an economically advantageous decontamination technique for such organochlorine substances by treating them with a plasma in which a controlled flow comprising oxygen and none of the organochlorine substance being treated is introduced.

Karas, the primary reference applied against the claims, relates to an odor removal system designed to neutralize odors and volatile organic compounds (VOC). Thus, and clearly, the Karas apparatus is designed specifically for the treatment of gaseous samples. The present invention, on the other hand, is now limited to the treatment of organochlorine

substances in the liquid or solid state, and thus in at least this way differs significantly from Karas in both execution and effect.

In addressing the limitations of original Claim 6 which specified the treatment of an organochlorine substance in the liquid or solid state, the Examiner cited to the paragraph bridging columns 9 and 10 of Karas, which relates only to “air and/or gasses” being treated in the Karas apparatus. This portion of the reference does also indicate that contaminants can be present in the gas passing through the cell and that some of these contaminants can be condensing water or other condensing vapors, or particles, it is important to realize that such contaminants are not being treated in the Karas apparatus, as there is no indication that these materials are subjected to the reactive oxygen species (see the paragraph bridging columns 8 and 9 of Karas). Instead, the electrodes are *protected from* these contaminants, which destroy the Karas cell by causing short circuits (see the sentence bridging columns 9 and 10 of Karas). In distinct contrast, the present invention method is specifically designed to treat liquid and solid organochlorine substances with the generated plasma.

For these reasons one of ordinary skill in the art would not attempt to use the Karas cell in the treatment of liquid or solid state organochlorine substances, as required in Applicants’ presently claimed method. As noted at specification page 5, lines 8ff, the present invention is surprisingly effective at decomposing organochlorine substances in the solid state due, it is believed, to the ability of the present invention method to enrich the plasma with oxygen radicals (the same is true for organochlorine substances in the liquid state). Thus, and as a result of the present invention, it is no longer necessary to vaporize an organochlorine substance before it is decomposed. Karas simply does not envision such a possibility.

Accordingly, Applicants respectfully submit that neither Karas nor any of Applicant’s statements in the present specification anticipate or, in the alternative, render obvious the

Application No. 10/587,453  
Reply to Office Action of January 20, 2010

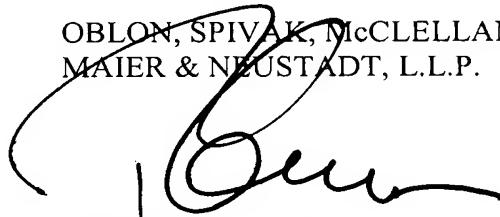
present invention. Secondary reference Rogers, cited as describing a particular configuration of electrodes, does not address the deficiencies of Karas and, thus, does not make up for that lacking in this reference.

Accordingly, and in view of the above amendments and remarks, Applicants respectfully submit that the present application is in condition for allowance. Reconsideration and withdrawal of the outstanding rejections is requested, as is a Notice of Allowance.

Early notification to this effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, L.L.P.



---

Richard L. Treanor  
Attorney of Record  
Registration No. 36,379

Customer Number  
**22850**

Tel: (703) 413-3000  
Fax: (703) 413 -2220  
(OSMMN 07/09)